

A new species of the genus *Marpissa* (Araneae: Salticidae) from Japan

Yuki G. Baba

National Institute for Agro-Environmental Sciences, 3-1-3 Kannon-dai, Tsukuba-shi, Ibaraki, 305-8604 Japan

E-mail: ybaba@affrc.go.jp

Abstract — A new species of the genus *Marpissa* (Araneae: Salticidae), *Marpissa mashibarai* sp. nov., is described using specimens obtained from Yamaguchi and Tokyo Prefs., in Honshu Island, Japan. This species exhibits poorly marked sexual dimorphism in body size and coloration. Both sexes have the black median line on dorsum of abdomen, allowing us to distinguish it from the other congeneric species.

Key words — *Marpissa*, new species, Salticidae, taxonomy

Introduction

The salticid spiders of the genus *Marpissa* C. L. Koch 1846, which is composed of about 50 species, are widely distributed in North and South America and Palearctic regions (Logunov 1999; Platnick 2012). In Japan, three species, *M. milleri*, *M. pomatia* and *M. pulla*, have been recorded from the main islands (Ono 2009). Here, I describe a new species of this genus using the specimens obtained from Honshu Island of Japan. The holotype and paratypes have been deposited in the collection of the Department of Zoology (Tsukuba), National Museum of Nature and Science, Tokyo.

The following abbreviations are used: ALE, anterior lateral eye; AME, anterior median eye; PLE, posterior lateral eye; PME, posterior median eye. The distances between eyes are expressed as following e.g. ALE-AME.

Marpissa mashibarai sp. nov.

[Japanese name: Wainoji-haetori]

(Figs. 1–6)

Specimens examined. Holotype: ♂, Chojagamori, Akiyoshidai, Mine City, Yamaguchi Pref., 4-VII-2010, T. Nakamoto leg. (NSMT-Ar 9986). Paratypes: 1♀, same data as for the holotype (NSMT-Ar 9987). 1♀, Dekimizu, Akiyoshidai, Mine City, Yamaguchi Pref., 9-VII-1994, K. Mashibara leg. (NSMT-Ar 9988).

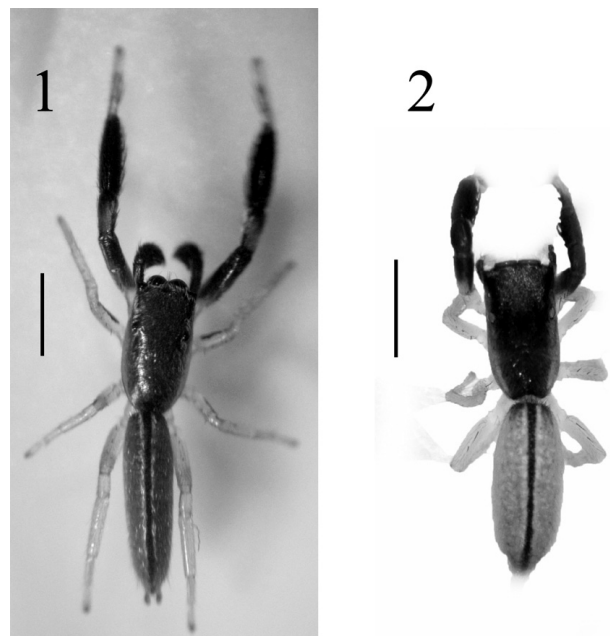
Other specimens examined. 1♂, Chojagamori, Akiyoshidai, Mine City, Yamaguchi Pref., 24-VI-2000, K. Mashibara leg., 1♀, Ougi, Adachi-ku, Tokyo, 7-VI-2012, H. Abe leg.; this spider was collected as juvenile and became adult after rearing.

Description. Based on the holotype male and one of the female paratypes (NSMT-Ar 9987). Measurements (♂/♀, in mm): body length 3.63/3.44; carapace length 1.63/1.56, width 0.88/0.81, height 0.55/0.64; abdomen length 2.06/1.94, width 0.75/0.72; eye fields ALE-ALE 0.79/0.79,

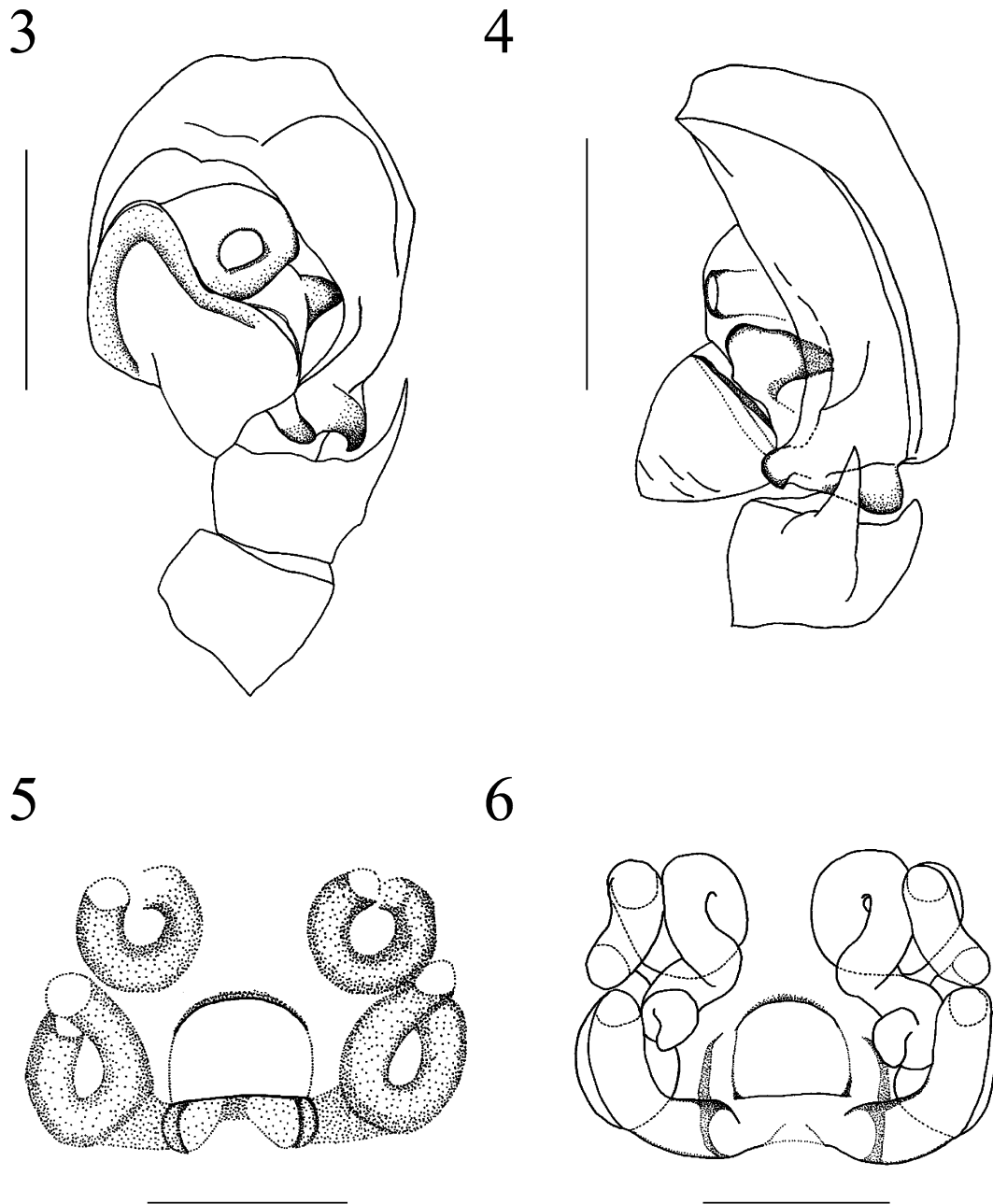
ALE-PLE 0.61/0.61, PLE-PLE 0.76/0.76, ALE-PME 0.36/0.30, ALE/AME 0.56/0.62, ALE/PLE 1.25/1.25, PME/PLE 0.25/0.25, AME diameter 0.27/0.24. Measurements of legs as shown in Table 1.

Coloration and markings. Male (Fig. 1): Carapace black, lateral margins light reddish brown. Chelicerae, maxillae and labium black. Sternum light brown. Abdomen dorsum reddish brown, with a black median line edged with white hairs. Leg I: tibia, patella and femur black, the other segments rather transparent. Leg II: ventral side of femur black, remaining part rather transparent. Leg III, IV: all segments rather transparent. Female (Fig. 2): almost the same as in male.

Male palp (Figs 3–4). Subtegulum well developed; tibial



Figs. 1–2. *Marpissa mashibarai* sp. nov. 1, male, dorsal view (holotype); 2, female, dorsal view. Scales = 1 mm.



Figs. 3–6. *Marpissa mashibarai* sp. nov., male holotype (3–4) and female paratype (NSMT-Ar 9987) (5–6). 3, male left palp, ventral view; 4, same, retrolateral view; 5, epigynum, ventral view; 6, internal female genitalia, dorsal view. Scales = 0.25 mm (3–4); 0.10 mm (5–6).

Table 1. Measurements of leg segments of *Marpissa mashibarai* [male holotype/female paratype (NSMT-Ar 9987), in mm].

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0.97/0.79	0.64/0.45	1.00/0.63	0.67/0.42	0.36/0.27	3.64/2.56
II	0.64/0.51	0.33/0.27	0.51/0.45	0.33/0.30	0.27/0.24	2.08/1.77
III	0.58/0.48	0.24/0.24	0.36/0.27	0.36/0.30	0.30/0.24	1.84/1.53
IV	0.85/0.70	0.36/0.30	0.76/0.63	0.51/0.30	0.30/0.30	2.78/2.23



Fig. 7. Habitat of *Marpissa mashibarai*; Chojagamori, Akiyoshidai, Mine City, Yamaguchi Pref.

apophysis distinct and sharpened; cymbial ledge well developed; lateral cymbial process blunt.

Female genitalia (Figs. 5–6). Copulatory openings large; spermathecae long tube-shaped and coiled.

Variation (2♂, 3♀). Body length: ♂3.63–4.19 mm, ♀3.25–4.50 mm. Carapace length: ♂1.63–1.69 mm, ♀1.38–1.69 mm; width: ♂0.88 mm, ♀0.75–0.94 mm; height: ♂0.54–0.76 mm, ♀0.61–0.67 mm. Abdomen length: ♂2.06–2.31 mm, ♀1.69–2.69 mm; width: ♂0.75–0.81 mm, ♀0.72–0.94 mm; length/width: ♂2.75–2.85, ♀2.16–2.87. Eye fields. ALE-ALE: ♂0.76–0.79 mm, ♀0.76–0.85 mm; PLE-PL: ♂0.76 mm, ♀0.76–0.82 mm; ALE-PL: ♂0.61–0.64 mm, ♀0.58–0.67 mm; ALE-PME: ♂0.30–0.36 mm, ♀0.30–0.36 mm; ALE-PL/carapace length: ♂0.37–0.38, ♀0.39–0.42; ALE-ALE/PLE-PL: ♂1.00–1.04, ♀1.04; AME diameter: ♂0.24–0.27 mm, ♀0.24–0.27 mm; ALE/AME: ♂0.56–0.63, ♀0.63–0.67; ALE/PLE: ♂1.25, ♀1.25–1.67; PME/PLE: ♂0.25, ♀0.25–0.33.

Diagnosis. The new species is the smallest within the genus. This species can be easily distinguished from the other congeneric species by having the black median line on dorsum of abdomen (Figs. 1–2). The genital structure is

also clearly distinct from those of the other congeneric species. Male can be separated by the unique shape of lateral cymbial process and tibial apophysis (Figs. 3–4). Female can be distinguishable by the relatively large copulatory openings and the unique structure of spermathecae (Figs. 5–6).

Notes on habitat. This new species potentially occurs in various environments, because materials used for this study were obtained from different environments in the respective regions: a vast grassland on the Karst plateau in Yamaguchi Pref., and a riverside park surrounded by urban areas in Tokyo Pref. Some individuals from Yamaguchi Pref. were captured by sweeping method from short bamboo bush, *Pleioblastus chino* (Mashibara pers. comm., Fig. 7), indicating that this species tends to inhabit short vegetation.

Distribution. Japan: Honshu (Yamaguchi and Tokyo Prefs.).

Etymology. The specific name is dedicated to Mr. Keiichi Mashibara, who found this species for the first time.

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References

- Koch, C. L. 1846. Die Arachniden. Dreihunter Band, Nürnberg, 234 pp.
- Logunov, D. V. 1999. Redefinition of the genera *Marpissa* C. L. Koch, 1846 and *Mendoza* Peckham & Peckham, 1894 in the scope of the Holarctic fauna (Aranae, Salticidae). *Revue Arachnol.*, 31: 25–60.
- Ono, H. (ed.) 2009. The spiders of Japan: with keys to the families and genera and illustrations of the species. Tokai University Press, Kanagawa, 738 pp.
- Platnick, N. I. 2012. The world spider catalog, version 13.0 American Museum of Natural History, online at <http://research.amnh.org/entomology/spiders/catalog/index.html>. (Accessed February 2013)

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